

AMENDMENTS TO THE CLAIMS

1-159. (Canceled)

160. (Currently Amended) An array comprising a surface having at least 96 locations, [[,]] wherein each location comprises (i) eukaryotic cells ~~that are disposed on~~ and (ii) a feature comprising one or more defined nucleic acid molecules in a discrete location, wherein the eukaryotic cells are on top of the nucleic acids and the nucleic acid molecules are so affixed to the surface that the cells are capable of becoming become transfected with the one or more defined nucleic acid molecules when the array is maintained for a suitable period of time, ~~thereby forming an array of transfected eukaryotic cells positioned at discrete locations on the surface.~~

161. (Previously Presented) The array of claim 160, wherein the one or more defined nucleic acid molecules are non-viral.

162. (Previously Presented) The array of claim 160, wherein, in at least one feature, the one or more defined nucleic acid molecules are contained in a vector.

163. (Previously Presented) The array of claim 160, wherein, in at least one feature, the one or more defined nucleic acid molecules are contained in a plasmid.

164. (Previously Presented) The array of claim 160, wherein, in at least one location, the one or more defined nucleic acid molecules encode polypeptides.

165. (Previously Presented) The array of claim 160, wherein the cells are disposed on the surface at a density of $0.3 \times 10^5/\text{cm}^2$ to $3.0 \times 10^5/\text{cm}^2$.

166. (Previously Presented) The array of claim 160, wherein, in at least one feature, the one or more defined nucleic acid molecules are DNA.

167. (Previously Presented) The array of claim 160, wherein, in at least one feature, the nucleic acid molecules comprise at least two different nucleic acid molecules.

168. (Previously Presented) The array of claim 160, wherein the features are produced by using a microarrayer to deposit the nucleic acid molecules on the surface.

169. (Previously Presented) The array of claim 160, wherein the features comprise RNA.

170. (Previously Presented) The array of claim 160, wherein the features comprise nucleic acid molecules that interfere with the function of an endogenous gene when introduced into the eukaryotic cells.

171. (Previously Presented) The array of claim 160, wherein the nucleic acid molecules are capable of inducing post-transcriptional gene silencing when present in the eukaryotic cells.

172. (Previously Presented) The array of claim 160, wherein the nucleic acid containing features are not sequestered in individual wells.

173. (Previously Presented) The array of claim 160, wherein the array is formed by adding cells and a transfection reagent to a surface comprising a plurality of features each of which comprises one or more defined nucleic acid molecules affixed to the surface in a discrete, defined location.

174. (Previously Presented) The array of claim 160, wherein the surface comprises up to 10,000-15,000 features.

175. (Currently Amended) The array of claim ~~any of claims 160 and 168-174~~, wherein the features comprise a carrier.

176. (Previously Presented) The array of claim 160, wherein, in at least one feature, the one or more defined nucleic acid molecules encode a double-stranded RNA molecule.

177. (Previously Presented) The array of claim 160, wherein, in at least one feature, the one or more defined nucleic acid molecules has a modified base or backbone.

178-236. (Canceled)

237. (Previously Presented) The array of claim 160, wherein at least 10 different nucleic acid sequences are present on said surface at discrete locations.

238. (Previously Presented) The array of claim 237, wherein at least 100 different nucleic acid sequences are present on said surface at discrete locations.

239. (Previously Presented) The array of claim 238, wherein at least 1000 different nucleic acid sequences are present on said surface at discrete locations.

240. (Previously Presented) The array claim 160, said array comprising features comprising two or more different defined nucleic acid molecules.

241. (Previously Presented) The array of claim 160, wherein the features comprise a protein.

242. (Previously Presented) The array of claim 160, wherein the features comprise a lipid.

243. (Previously Presented) The array of claim 160, wherein the features comprise fibronectin.

244. (Previously Presented) The array of claim 160, wherein the surface comprises a cationic moiety.

245. (Previously Presented) The array of claim 160, wherein the surface comprises a capture moiety.

246. (Previously Presented) The array of claim 160, further comprising cell culture medium.